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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,837	02/13/2001	Thomas Birkholzer	1998P03666WOUS	2743
28204	7590	02/03/2005	EXAMINER	
SIEMENS SCHWEIZ I-44, INTELLECTUAL PROPERTY ALBISRIEDERSTRASSE 245 ZURICH, CH-8047 SWITZERLAND			SAADAT, CAMERON	
			ART UNIT	PAPER NUMBER
			3713	

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,837

Applicant(s)

BIRKHOLZER ET AL. ED

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-15 and 17-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-15, 17-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/18/2004 has been entered. Claims 13-15 and 17-35 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-15 and 17-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim limitation, "to detect characteristic points, lines, contours, *or equivalent characteristics* of the person shown in the recorded video image, *or* of the displayed area of the person", includes multiple alternatives and is therefore indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13-15, 17-24, and 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (USPN 5,904,484), in view of Baker (USPN 5,486,001).

Regarding claim 13, Burns discloses a system for self-monitoring by a moving person of body movements, comprising: a video camera configured to generate a recorded video image or image sequence; a monitor operatively coupled to the video camera for outputting the recorded video image or image sequence; an insertion component configured to insert at least one moving marker, indicating a predetermined movement or body position, into the video image or image sequence (Col. 2, line 43 – Col. 3, line 65); and to detect characteristic points, lines, contours, or equivalent characteristics of the person shown in the recorded video image, or of the displayed area of the person, while the person is not moving; to automatically adapt the marker in a manner dependent on a detection result; and to automatically adapt a size or insertion position on the marker in a manner dependent on the detection results; wherein the insertion component is configured to detect characteristic points, lines, contours, or equivalent characteristics of the moving person or of a displayed area of the moving person (Col. 7, line 66 – Col. 8, line 4; Col. 11, lines 2-4).

Burns discloses all of the claimed subject matter of claim 13 with the exception of explicitly stating that the insertion component is configured to *automatically* adapt the movement speed of the moving marker to the movement speed of the moving person or of a displayed area of the moving person. Yet Burns discloses a marker insertion component configured to superimpose a marker in a continuous motion over a captured golfer's swing, in real-time (Col. 12, lines 39-50). Burns additionally suggests a means for providing control of the speed of the moving marker (See claim 14). Accordingly, it would be inherent that the motion marker *automatically* track the movement speed or display area of a moving

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person in order to superimpose the marker with body movements in real-time. Although Burns does not explicitly state an *automatic* means associated with the marker, Baker discloses a system for self-monitoring body movements, wherein an insertion component is programmable for superimposing a marker onto a golfer's captured swing based on the swing speed (Col. 7, lines 44-54). Hence, it would have been obvious to a one of ordinary skill in the art to modify the insertion component described in Burns, by automatically adapting the movement speed of the moving marker, in light of the teachings Baker, in order to synchronize the marker with a user's body movements thereby allowing correct comparison to facilitate training.

Regarding claim 14, Burns discloses a system wherein the insertion component is configured for inserting at least one stationary marker that is stationary during the body movement and indicates a predetermined, ideal body movement (see claim 13).

Regarding claim 15, Burns discloses a system wherein the insertion component is configured for inserting at least one stationary marker suitable for adjustment of the person with respect to the video camera (see claim 16).

Regarding claim 17, Burns discloses a system wherein the insertion component is configured to automatically adapt a size and/or insertion position of the marker in a manner dependent on the detection result (column 7, line 36 – column 8, line 4).

Regarding claim 18, Burns discloses a system wherein the insertion component is configured: to detect characteristic points, lines, contours, or equivalent characteristics of the person shown in the recorded video image or image sequence, or of the displayed area of the person, while the person is performing a movement sequence and is shown in the recorded video image sequence; to automatically adapt the marker in a manner dependent on a detection result (column 7, line 36 – column 8, line 4).

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Regarding claims 19 and 28, Burns discloses a system wherein the insertion component is configured to automatically adapt a size and insertion position of the marker in a manner dependent on the detection result (column 7, line 36 – column 8, line 4).

Regarding claims 20 and 29-31, Burns discloses a system wherein the system is further configured for *manually* varying size and insertion position and movement speed of the marker (Col. 9 line 66 – Col. 10, line 12; Col 7, line 59; Claim 14).

Regarding claim 21, Burns discloses a system comprising a storage component operatively coupled to the insertion component, wherein for a plurality of different predetermined body movement sequences, insertion data is stored for at least one marker, and the person may select from among the stored insertion data (see claim 23).

Regarding claims 22 and 32, Burns discloses a system wherein the moving marker comprises point 78 and line 74 (see Fig. 4b).

Regarding claims 23 and 33-35, Burns discloses a system wherein a point and a line form a stylized person (see Fig. 2a, ref. 12).

Regarding claim 24, Burns discloses a system wherein the system is configured for allowing the user to select from among different display forms (see claim 17).

Regarding claim 27, Burns discloses a system wherein the insertion component 210 comprises a separate component within a communications channel between video camera 230 and monitor 250 (see Fig. 7).

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (U.S. Patent No. 5,904,484), in view of Baker (USPN 5,486,001), further in view of Uekane et al. (USPN 5,559,554; hereinafter Uekane).

Burns discloses a system wherein the insertion component 210 comprises a separate component within a communications channel between video camera 230 and monitor 250 (see Fig. 7). The

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combination of Burns and Baker does not explicitly teach that the insertion component may be integrated in the monitor (as per claim 26) or the video camera (as per claim 25). However, Uekane discloses an integrated camera-monitor system wherein an insertion component 209 is integrated with a monitor and camera (See Fig. 7). Hence, it would have been obvious to one of ordinary skill in the art to modify the insertion component described in the combination of Burns and Baker, by providing the insertion component within the camera or monitor, in light of the teachings of Uekane, thereby integrating the camera, monitor, and insertion component and unifying these components into one system.

Response to Arguments

Applicant's arguments filed 11/18/2004 have been fully considered but they are not persuasive.

Applicant asserts that the marker insertion means of the instant invention is based on detection of various characteristic points, lines or contours of a person within a video image; emphasizing that Burns discloses a manual marker insertion means based on matching a person with an instructor by gender, age, and body type.

Burns may not explicitly state that the marker is dependent on characteristic points, lines, and contours of a recorded image. However, it is the examiner's position that the size of the person shown in the recorded image is an *equivalent characteristics* of a person depicted on the screen. In (Col. 7, line 66 – Col. 8, line 4), Burns discloses, "In an alternate embodiment, the recorded image of the instructor (the marker) in the motion template 10 is scaled, such as by a computer, to the size of the student's image. Several scaling techniques are available commercially in animation software." In addition, it is noted that the limitations recited in the claim language only require adapting the marker based on detection of characteristic points, lines, contours, *or equivalent characteristics of the person shown in the recorded video image*. Thus, Burns discloses the claimed features including the feature of adapting the marker based on *equivalent characteristics of the person (size of a person) shown in the recorded video image*.

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Applicant is reminded that claims are given their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Applicant further emphasizes that the combination of Baker and Burns would not arrive at the presently claimed invention. However, the standard of patentability is what the prior art, taken as a whole, suggests to an artisan at the time of the invention. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375, 379 (Fed. Cir. 1986). The question is not only what the references expressly teach, but what they would collectively suggest to one of ordinary skill in the art. *In re Simon*, 461 F.2d 1387, 1390, 174 USPQ 114, 116 (CCPA 1972). In this case, Burns discloses all of the claimed subject matter of claim 13 with the exception of explicitly stating that the insertion component is configured to *automatically* adapt the movement speed of the moving marker to the movement speed of the moving person or of a displayed area of the moving person. Yet Burns does disclose a marker insertion component configured to superimpose a marker in a continuous motion over a captured golfer's swing, in real-time (Col. 12, lines 39-50). Burns additionally suggests a means for providing control of the speed of the moving marker (See claim 14). Accordingly, it would be inherent that the motion marker *automatically* track the movement speed or display area of a moving person in order to superimpose the marker with body movements in real-time. Although Burns does not explicitly state an *automatic* means associated with the marker, Baker discloses a system for self-monitoring body movements, wherein an insertion component is programmable for superimposing a marker onto a golfer's captured swing based on the swing speed (Col. 7, lines 44-54). Hence, even if not inherent, it would have been obvious to a one of ordinary skill in the art to modify the insertion component described in Burns, by automatically adapting the movement speed

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of the moving marker, in light of the teachings Baker, in order to synchronize the marker with a user's body movements thereby allowing correct comparison to facilitate training.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


- Ohsuga et al. (USPN 6,244,987) – disclose a virtual environment based on a user's detected gestures.
- Ahlgren (USPN 6,293,802) – discloses a golf training system comprising a recorded video of a golfer's swing synchronized with an overlay of expert swing markers.
- Curchod (USPN 5,826,578) – discloses a golf training system that utilizes motion sensors on a golfer to record body movements during a golf swing, wherein the recorded movements are compared with an expert swing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is (571) 272-4443. The examiner can normally be reached on M-F 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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